

**REMARKS**

Claims 1 - 3, 26, 35 and 36 have been amended. Claims 20, 25, 29 and 30 have been cancelled. Claims 1-19, 21-24, 26-28 and 31-39 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

Applicants note with appreciation the allowance of claims 31-34.

Claims 35-39 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner stated:

Claim 35 is confusing as to what the controller has to do with the message. It is also confusing in that the controller has no relationship with the touch pad, it is not clear where are the current set of native values and the prior set of native values coming from? Are they related to touch pad event, button event, or event parameter? Are the values compared by the controller different from the touch pad event, button event, or event parameter?

Claim 36 is confusing in that the controller has no relationship with the touch pad, it is not clear where are the current set of native values and the prior set of native values coming from? In addition, the terms "capable of" also renders the claim vague and indefinite in that a positive recitation is missing.

This rejection is respectfully traversed with respect to claims 35-39, as amended.

Claim 35, as amended, is directed to a system comprising a touch pad assembly, a host device and a controller. The controller is configured to compare a current set of native values and a prior set of native values and identify the current set of native values as noise events or actual events depending on whether the current set of native values and the prior set of native values are substantially similar. The controller is configured to pass the native values through a filtering process before adjusting the native values into new values, thereby reducing an amount of data sent to the host. The touch pad assembly is configured to communicate a message to the host device. The message comprises an event field and an event identifier field. The event field identifies whether the message is a touch pad event or a button event. The event identifier field identifies at

least one event parameter. Each event parameter has an event value. The event value for a touch pad event parameter indicates an absolute position. The event value for a button event parameter indicates button status. One example of the system defined by amended claim 35 is described in paragraphs 0069 and 0070 of the present application (publication no. 20050110768).

Claim 36, as amended, is directed to a touch pad system configured to transform a user action into motion onto a display screen. The touch pad system comprises a touch pad and a controller. The entire touch sensing surface of the touch pad is divided into a plurality of independent and spatially distinct actuation zones. Each of the zones includes a plurality of sensing nodes of the touch sensing surface. Each of the zones represents a different control function. The controller is configured to compare a current set of native values and a prior set of native values and identify the current set of native values as noise events or actual events depending on whether the current set of native values and the prior set of native values are substantially similar. The controller is also configured to pass the native values through a filtering process before adjusting the native values into new values, thereby reducing a busy data stream so that the host device is not overloaded.

It is respectfully submitted that claims 35-39, as amended, particularly point out and distinctly claim the subject matter which the applicant regards as the invention and are therefore in compliance with the requirements of 35 U.S.C. 112, second paragraph.

Claims 1-19, 21-24, 26-28 and 35-39 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bertram USP 5,613,137 in combination with one or more additional prior art references. This rejection is respectfully traversed with respect to the claims, as amended.

The amended claims are directed to methods and devices comprising a number of features or elements in combination. For example, amended claim 1 is directed to a touch pad assembly comprising a combination of elements. The claimed combination includes a touch pad and a controller. The controller is configured to receive native values associated with native sensor coordinates, adjust the native values into new values associated with logical device units and report

the new values to a host device. Moreover, the claimed controller is configured to pass the native values through a filtering process before adjusting the native values into new values. This reduces the amount of data sent to the host (by, for example, reducing a busy data stream so that the host device is not overloaded). For example, redundant or non-essential data may be removed so the data do not reach the host device.

One example of a touch pad assembly within the scope of amended claim 1 is described in paragraph 0041 of the present application (publication no. 20050110768). In this example, controller 38 monitors the sensors of touch buttons 34 and touch pad 36 and decides what information to report to host device 24. That decision may include filtering processes. The filtering process may reduce a busy data stream so that the host device 24 is not overloaded with redundant or non-essential data. Processing a busy data stream tends to require a lot of power. It can have a negative effect on portable devices such as media players that use a battery with a limited power supply. The filtering process removes redundant signals so that they do not reach the host device 24.

In other words, the combination defined by amended claim 1 covers a controller which not only adjusts native values into new values and reports the new values to a host device, but which also filters the native values before adjusting the native values into new values, thereby reducing the amount of data sent to the host so that the host device is not overloaded. For example, in one embodiment the combination defined by amended claim 1 may remove redundant or non-essential data so the data do not reach the host device. Consequently, the claimed combination can prevent the host device from being overloaded with redundant or non-essential data. This provides a significant advantage in portable devices such as media players that use a battery with a limited power supply.

A similar combination of elements, including a controller that passes native values through a filtering process before adjusting the native values into new values, thereby reducing the amount of data sent to the host so that the host device is not overloaded, is neither disclosed nor suggested in any of the cited references.

The Examiner acknowledges that the primary reference of Bertram fails to disclose or suggest a combination including a controller configured to compare a current set of native values and prior set of native values and to identify the current set of native values as associated with noise events or actual events. The Examiner relies upon the secondary reference of Meadows USP 5,053,757 for such teaching, stating:

“Meadows teaches a touch pad with an adaptive filtering techniques having a controller configured to determine the rate of movement of a user's finger or stylus on the touch pad from a computation of a distance between the last reported touch location and the current touch location, and to identify the current values associated with noise events or actual event (col. 35, line 30 to col. 36, line 68 for example) based on the computed result of the prior location value with the current location value. Meadows' computation is essentially comparing the prior location to the current location to determine if there's any changes in the locations and if there is no change or minimal change (i.e. substantially similar) than the result is determined to be noise, otherwise the result is determined to be an actual event. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the touch pad of Bertram as modified by Liu to have the filtering feature as taught by Meadows such that the touch panel minimizes the effects of noise on touch location determination and to provide a touch pad device for locating touch on a touch sensing surface thereof with relative high degree of reliability and accuracy (see last seven lines in the abstract and col. 4, lines 34-37 of Meadows).”

However, there is no teaching or suggestion in either Bertram or Meadows of a combination including a controller configured to pass the native values through a filtering process before adjusting native values into new values, thereby reducing the amount of data sent to the host so that the host device is not overloaded. Neither Bertram nor Meadows disclose or suggest both a controller and a host device. Neither Bertram nor Meadows disclose a controller which both adjusts native values into new values and which also filters the native values before adjusting the native values in order to reduce the amount of data sent to the host so that the host device is not overloaded. Neither Bertram nor Meadows disclose a combination capable of reducing a busy data stream by, for example, removing redundant or non-essential data so that the data do not reach the host device and so that the host device is not overloaded. Consequently, the significant advantages which claim 1 can provide in portable devices such as media players is neither disclosed nor suggested in Bertram or Meadows, viewed together or in combination with any other cited reference.


Independent claims 26, 31, 35 and 36 have been amended in a manner similar to claim 1. It is respectfully submitted that these amendments render all of the claims patentably distinct from the references for the reasons indicated above with respect to amended claim 1.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 106842005400.

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